

Graphing linear equations

There are three methods we can use to graph linear equations:

Method 1. Make a table of values.

Substitute values in for x and solve for y .

Graph the ordered pairs from the table.

x	y
-2	
0	
8	

Method 2. Using slope-intercept form ($y = mx + b$), plot the y -intercept on the graph first and then use the slope to move to find more points on the graph.

Example: $y = 8 - \frac{4x}{5}$

y -int = 8 so plot $(0, 8)$ on the graph first.

Slope = $-\frac{4}{5}$ starting at $(0, 8)$ move down 4 spaces then 5 spaces right to plot the next point.

the next point
Keep moving
 $\frac{4 \text{ down}}{5 \text{ right}}$ OR $\frac{4 \text{ up}}{5 \text{ left}}$
to create more points

Method 3. Plotting the y-intercept point and the x-intercept point.

① To find the x-intercept
Substitute 0 into the
y-value and solve for
x.

Ex: $4x + 7y = 16$

x-int: $4x + 7(0) = 16$

$$\frac{4x}{4} = \frac{16}{4}$$

$$x = 4 \text{ or } (4, 0)$$

y-int: $4(0) + 7y = 16$

$$\frac{7y}{7} = \frac{16}{7}$$

$$y = \frac{16}{7}$$